# San Diego & Arizona Eastern Railway Company

# TIME TABLE

# 75

## To Take Effect **Sunday, June 11, 1939,** at 12:01 A.M.

Pacific Standard Time (120th Meridian)

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FOR THE GOVERNMENT AND INFORMATION OF EMPLOYES ONLY.

F. L. ANNABLE,
General Manager.

J. R. LOWE,
Superintendent.

## SAN DIEGO-LAKESIDE SUBDIVISION

| EASTWARD Siding Capacity in Car Lengths | Station Numbers | Elevation | Distance from San Diego | Time Table No. 75 June 11, 1939 STATIONS | Distance from Santee | WESTWARD |
|---|---|---|---|---|---|---|
| Yard | | | 1.1 | ToR EIGHTH STREET | 18.9 | |
| | | | | 3.6 | | |
| 13 | L 5 | | 4.7 | CHOLLAS | 15.3 | |
| | | | | 2.5 | | |
| 12 | L 7A | 317 | 7.2 | ENCANTO | 12.8 | |
| | | | | 3.2 | | |
| 5 | L 10 | 410 | 10.4 | LEMON GROVE | 9.6 | |
| | | | | 1.9 | | |
| 25 | L 13 | 539 | 12.3 | To LA MESA | 7.7 | |
| | | | | 3.0 | | |
| 9 | L 15 | 741 | 15.3 | GROSSMONT | 4.7 | |
| | | | | 1.5 | | |
| 19 | L 17 | 460 | 16.8 | To EL CAJON | 3.2 | |
| | | | | 3.2 | | |
| 25 | L 20 | 385 | 20.0 | SANTEE | 0.0 | |
| | | | | 19.3 | | |

Service by extra trains only.

## CHULA VISTA-CORONADO SUBDIVISION

| EASTWARD Siding Capacity in Car Lengths | Station Numbers | Distance from San Diego | Time Table No. 75 June 11, 1939 STATIONS | Distance from Third Street (Chula Vista) | WESTWARD |
|---|---|---|---|---|---|
| | 3 | 4.8 | TWELFTH ST. (Nat'l City) | 4.8 | |
| | | | 0.9 | | |
| | C 1 | 5.7 | 24th STREET (Nat'l City) | 3.9 | |
| | | | 1.4 | | |
| | C 2 | 7.1 | POTASH | 2.5 | |
| | | | 0.3 | | |
| | C 2A | 7.4 | F STREET JCT. | 2.2 | |
| | | | 0.2 | | |
| | 7 | 7.6 | CHULA VISTA JCT. (Crossing El Centro Line | 2.0 | |
| | | | 0.9 | | |
| | C 4 | 8.7 | CHULA VISTA | 1.1 | |
| | | | 1.1 | | |
| | C 5 | 9.8 | K STREET (Chula Vista) | 0.0 | |
| | | | (9.8) | | |

Service by extra trains only.

Trains operating between 12th Street, National City and K Street, Chula Vista will move under yard rules.

## CHULA VISTA-CORONADO SUBDIVISION

| EASTWARD Siding Capacity in Car Lengths | Station Numbers | Distance from San Diego | Time Table No. 75 June 11, 1939 STATIONS | Distance from North Island | WESTWARD |
|---|---|---|---|---|---|
| | C 2A | 7.4 | F STREET JCT. | 15.3 | |
| | | | 0.1 | | |
| 11 | C 3 | 7.5 | MARMAROSA | 15.2 | |
| | | | 2.4 | | |
| 13 | C 4A | 9.9 | SALT WORKS | 12.8 | |
| | | | 3.5 | | |
| 13 | C 8 | 13.4 | CORONADO HEIGHTS | 9.3 | |
| | | | 5.3 | | |
| 11 | C13 | 18.7 | TENT CITY | 4.0 | |
| | | | 2.0 | | |
| | C15 | 20.7 | CORONADO (Ferry Landing) | 2.0 | |
| | | | 2.0 | | |
| Yard | C17 | 22.7 | NORTH ISLAND | 0.0 | |
| | | | (15.3) | | |

Service by extra trains only.

## SAN DIEGO-EL CENTRO SUBDIVISION

# Time Table No. 75

June 11, 1939

| Siding Capacity in Car Lengths | Location of Scales, Fuel, Water, Turning and Telephone Station | EASTWARD SECOND CLASS 52 Imperial Valley Mixed Leave Daily Except Sunday | EASTWARD FIRST CLASS 4 Golden State Leave Daily | Station Numbers | Distance from San Diego | STATIONS | Distance from El Centro | Elevation | WESTWARD FIRST CLASS 3 Golden State Arrive Daily | WESTWARD SECOND CLASS 51 Imperial Valley Mixed Arrive Daily Except Sunday |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Figures sho | wn Between | | Miles | Information Only. Be Governed by | Curre | nt Ti | me Tables | A. T. & S. F. Ry. |
| | | | San Diego | and Market | Street | are for | Miles | Feet | Arrive Daily | |
| | | | | 6.45PM | | 0.0 R SAN DIEGO | 148.1 | | 8.25PM | |
| | | | | 6.47 | | 0.4 MARKET STREET | 147.7 | | 8.23 | |
| | | | | 6.47 | 00 | 0.4 MARKET STREET | 147.7 | | 8.23 | |
| | | | | | 0 | 0.3 FIRST STREET 0.4 | 147.4 | | | |
| Yard | KBPOWY | 9.30PM | | 6.49 | 1 | 1.1 To-R EIGHTH STREET KN | 147.0 | 10 | 8.21 | 4.30AM |
| | P | 9.39 | | 6.57 | 3 | 3.7 TWELFTH STREET | 143.3 | | 8.13 | 4.17 |
| 14 | P | f 9.46 | | f 7.02 | 7 | 2.6 CHULA VISTA JCT. (CROSSING C. V. LINE) | 140.7 | | f 8.07 | f 4.08 |
| 55 | P | 9.51 | | 7.04 | 8 | 1.7 BOAL | 139.0 | | 8.04 | 4.03 |
| | P | | | | 9 | 1.0 OTAY GRAVEL PIT (Spur) | 138.0 | | | |
| 20 | P | f 9.59 | | 7.07 | 10 | 1.0 PALM CITY | 137.0 | 35 | 8.01 | f 3.57 |
| 99 | KP | s 10.09 | | s 7.14 | 14 | 4.4 To-R SAN YSIDRO AU | 132.6 | 100 | s 7.53 | s 3.45 |
| 110 | PY | s 10.19 | | s 7.18 | 15 | 0.7 R TIJUANA | 131.9 | 100 | s 7.48 | s 3.35 |
| 30 | | 10.24 | | 7.23 | 18 | 2.3 AGUA CALIENTE | 129.6 | | 7.42 | |
| 47 | P | f 10.39 | | f 7.32 | 23 | 5.5 GARCIA | 124.1 | 210 | f 7.32 | f 3.11 |
| 33 | | f 10.49 | | f 7.39 | 26 | 3.5 MATANUCA | 120.6 | 350 | f 7.21 | f 2.59 |
| 46 | PWY | f 11.17 | | f 8.01 | 35 | 9.1 REDONDO | 111.5 | 765 | f 7.05 | f 2.32 |
| 41 | P | 11.44 | | 8.15 | 44 | 8.3 RITA | 103.2 | 1315 | 6.49 | 2.07 |
| 42 | P | 11.55 | | 8.22 | 47 | 3.5 LA PUERTA | 99.7 | 1590 | 6.42 | 1.56 |
| 31 | PW | s 12.14AM | | s 8.33 | 52 | 4.4 To-R TECATE CA | 95.3 | 1690 | s 6.35 | s 1.43 |
| 22 | | f 12.37 | | f 8.46 | 58 | 6.8 LINDERO | 88.5 | 2120 | f 6.19 | f 1.16 |
| 16 | P | | | | 59 | 0.7 DIVISION | 87.8 | 2190 | | |
| 67 | PO | f 1.01 | | f 9.00 | 65 | 5.5 To CAMPO KA | 82.3 | 2590 | f 6.08 | f 1.01 |
| 33 | PW | 1.20 | | 9.12 | 72 | 6.1 CLOVER FLAT | 76.2 | 2925 | 5.57 | 12.25 |
| 33 | P | 1.42 | | 9.25 | 78 | 6.5 PUEBLO | 69.7 | 3425 | 5.45 | 12.05AM |
| 45 | PY | s 2.05 | | f 9.36 | 84 | 6.1 HIPASS | 63.6 | 3660 | f 5.34 | s 11.50 |
| 10 | PW | s 2.35 | | s 9.54 | 93 | 8.4 To JACUMBA JO | 55.2 | 2830 | s 5.09 | s 11.00 |
| 37 | PO | 2.38 | | 9.56 | 94 | 1.1 TITUS | 54.2 | 2757 | 5.02 | 10.49 |
| 19 | P | 3.05 | | 10.18 | 100 | 6.7 CARRISO GORGE | 47.4 | 2380 | 4.40 | 10.18 |
| | P | | | 10.24 | 102 | 1.6 TUNNEL 15 SPUR | 45.8 | | 4.33 | |
| 72 | PW | f 3.40 | | f 10.47 | 109 | 7.4 DOS CABEZAS | 38.4 | 1670 | f 4.09 | f 9.20 |
| 36 | P | 4.15 | | 11.01 | 117 | 8.0 SUGAR LOAF | 30.4 | 790 | 3.46 | 8.42 |
| 85 | PWOY | s 4.38 | | s 11.12 | 122 | 4.8 COYOTE WELLS | 25.6 | 290 | f 3.33 | s 8.20 |
| 62 | P | f 5.02 | | f 11.23 | 130 | 7.5 PLASTER CITY NA | 18.1 | 40 | f 3.19 | f 7.55 |
| 73 | P | f 5.08 | | 11.26 | 131 | 1.7 MAREA | 16.4 | 27 | 3.16 | 7.50 |
| 73 | | f 5.16 | | f 11.30 | 134 | 2.7 DIXIELAND | 13.7 | -10 | f 3.12 | f 7.44 |
| 97 | P | f 5.28 | | f 11.37 | 139 | 5.4 SEELEY SY | 8.3 | -44 | f 3.05 | s 7.32 |
| 34 | P | 5.33 | | 11.40 | 141 | 1.8 ASPARA | 6.5 | -46 | 3.02 | 7.26 |
| 15 | | 5.40 | | 11.46 | 145 | 3.5 WILSIE | 3.0 | -47 | 2.57 | 7.19 |
| Yard | KBPWY | s 5.53AM | | s 11.53PM | 148 | 3.0 To-R EL CENTRO CR | 0.0 | -49 | 2.50PM | 7.10PM |
| | | Arrive Daily Except Monday | | Arrive Daily | | (148.1) | | | Leave Daily | Leave Daily Except Saturday |
| | | (8.23) | | (5.08) | | Time Over Subdivision | | | (5.35) | (9.20) |
| | | 17.53 | | 28.85 | | Average Speed per Hour | | | 26.52 | 15.86 |

**WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION:**

No. 52 stops on signal at Mills Crossing.
No. 4 stops on signal at Dubbers Spur.
Nos. 3 and 51 stop on signal at Mills Crossing.
No. 3 stops at Palm City to detrain passengers.

Track No. 1 classification yard is siding for Eighth St.
First crossover switch West of San Ysidro station is initial switch for Westward trains.
Second crossover switch West of San Ysidro station is initial switch for Eastward trains.

# Special Instructions

THE FOLLOWING APPLICATIONS AND ADDITIONS ARE MADE TO THE BOOK OF RULES:

### STANDARD CLOCKS

1. Telegraph office and Engine house San Diego, San Ysidro and El Centro.

### WATCH INSPECTORS

2. Stanley A. Pope, Manager of Time Service, San Francisco.
Leo. M. Schiller, local watch inspector, 1170 Fifth Avenue, San Diego.
R. E. Couch, local watch inspector, El Centro.
O. F. Haun, local watch inspector, Calexico.

### CLEARANCE CARDS

3. All trains get clearance cards as follows:
All at San Ysidro and Tecate.
All Eastward at 8th Street.

### REGISTER EXCEPTIONS

4. First class trains register by registering ticket (Form 2642) at 8th Street. Trains originating and terminating at Agua Caliente only will register there.
5. Extra trains will register at San Ysidro.

### GRADE CROSSINGS

6. Conductors and Brakemen, flagging crossings, will cross the tracks before signalling enginemen to proceed, and if more than one track to be crossed will remain in advance of their train until last track is reached.
7. Trains on San Diego-El Centro Subdivision will approach railroad crossing at F Street, Chula Vista, expecting to find the Main Line blocked and will pass over this crossing not to exceed 15 miles per hour.
8. At following grade crossings, trains will stop not nearer than 50 feet nor farther than 500 feet from the crossing and will proceed only on signal from flagman:
Crossing at Chula Vista Jct. except San Diego-El Centro subdivision trains which are governed by paragraph 7, Special instructions in Time Table.
San Diego Electric Railway crossing at First and Orange Street, Coronado.
San Diego Electric Railway crossing at 16th Street, San Diego.
Transfer track of San Diego Electric Railway Company, with tracks of that Company on Broadway, San Diego.
9. Trains going into Otay Gravel Pit will stop at West line of Main Ave., and not cross except when preceded by flagman with Red flag or light.
10. Trains leaving Otay Gravel Pit must be preceded by flagman over Main Ave., but will not be required to stop.
At Second Ave. and at sidewalk on Third Ave., near G Street, Chula Vista, stop and be preceded by flagman.
11. Freight trains will stop and pass over crossings at Lookout Ave., La Mesa, and Magnolia Ave., Santee, only when preceded by flagman.
12. Trains using San Diego Electric Railway Company Transfer will stop before crossing tracks of that Company on F Street, San Diego.
13. Trains approaching Mount Hope cemetery west of bridge 6 will use care to avoid meeting funeral parties where road crosses track. If any should be encountered there, hold train back and allow party to cross ahead of train.

### MAXIMUM SPEED OF TRAINS, EXCEPT AS OTHERWISE NOTED, IN MILES PER HOUR AS FOLLOWS:

14.

| | M.P.H. |
|---|---|
| Passenger trains | 50 |
| Freight trains | 35 |
| Mixed trains | 30 |
| Light engines | 35 |
| Engines 101 to 106, inclusive | 35 |
| Engines backing, coupled in train or light, main line | 25 |
| Same on branch lines | 20 |
| Trains handling locomotive crane | 20 |
| Trains handling dead or disabled engines with all rods on or with main or side rods removed | 30 |
| Same with main and side rods removed | 20 |
| All trains through sidings, main line | 12 |
| Same through sidings, branch lines | 10 |
| Trains handling large loaded tank cars on branch lines on tangent track | 20 |
| Trains handling large loaded tank cars on branch lines on curves | 15 |

**OTHER MAXIMUM SPEEDS IN MILES PER HOUR AS FOLLOWS:**

SAN DIEGO-EL CENTRO SUBDIVISION

15. **ALL TRAINS between following points:**

| | M.P.H. |
|---|---|
| Bridge 98 C and Tunnel 8, on curves | 10 |
| Tunnel No. 5 at Mile Post 96.6 and Culvert 106-B | 15 |
| Market St. and Schley St. | 20 |
| Over road crossings at 13th and 18th Sts., National City | 20 |

**PASSENGER TRAINS DESCENDING between following points:**

| | |
|---|---|
| Redondo and Kilometer 54 | 35 |
| Tecate and Mile Post 83 | 35 |
| Hipass and Jacumba | 35 |
| Culvert 106-B and Coyote Wells | 35 |

**FREIGHT AND MIXED TRAINS DESCENDING between following points:**

| | |
|---|---|
| Hipass and Jacumba | 20 |
| Culvert 106-B and Coyote Wells | 20 |
| Redondo and Kilometer 54 | 25 |
| Tecate and Mile Post 83 | 25 |

SAN DIEGO-LAKESIDE SUBDIVISION

16. **SAN DIEGO-LAKESIDE SUBDIVISION ALL TRAINS:**

| | M.P.H. |
|---|---|
| Crossing 30th Street on Commercial Street | 5 |
| Across 13th St. and National Ave. | 10 |
| Over Electric Ry. crossings at 16th St. and 25th on Commercial St. | 10 |
| Between 8th Street and 32nd Street | 15 |
| Over Horseshoe Bridge in Chollas Valley | 20 |
| Between 32nd St., San Diego and Santee | 25 |

CHULA VISTA-CORONADO SUBDIVISION

17. **ALL TRAINS:**

| | M.P.H. |
|---|---|
| On F Street and on 3rd Ave., Chula Vista | 10 |
| Between F St. Jct. and One Mile East of Salt Works | 25 |
| Between One Mile East of Salt Works and Tent City | 10 |
| Between Tent City and North Island | 15 |

18. SPEED TABLE—MILES

| Speed per Hour. | 1 Mile in Min. | Sec. | Speed per Hour. | 1 Mile in Min. | Sec. | Speed per Hour. | 1 Mile in Min. | Sec. | Speed per Hour. | 1 Mile in Min. | Sec. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 10 | | 21 | 2 | 51 | 31 | 1 | 56 | 41 | 1 | 27 |
| 8 | 7 | 30 | 22 | 2 | 43 | 32 | 1 | 52 | 42 | 1 | 25 |
| 10 | 6 | | 23 | 2 | 36 | 33 | 1 | 49 | 43 | 1 | 23 |
| 12 | 5 | | 24 | 2 | 30 | 34 | 1 | 45 | 44 | 1 | 21 |
| 15 | 4 | | 25 | 2 | 24 | 35 | 1 | 42 | 45 | 1 | 20 |
| 16 | 3 | 45 | 26 | 2 | 18 | 36 | 1 | 40 | 46 | 1 | 18 |
| 17 | 3 | 31 | 27 | 2 | 13 | 37 | 1 | 37 | 47 | 1 | 16 |
| 18 | 3 | 20 | 28 | 2 | 8 | 38 | 1 | 34 | 48 | 1 | 15 |
| 19 | 3 | 9 | 29 | 2 | 4 | 39 | 1 | 33 | 49 | 1 | 13 |
| 20 | 3 | | 30 | 2 | | 40 | 1 | 30 | 50 | 1 | 12 |

19. SPEED TABLE—KILOMETERS

| Speed Miles per Hour | 1 Kilometer in Min. | Sec. | Speed Miles per Hour | 1 Kilometer in Min. | Sec. | Speed Miles per Hour | 1 Kilometer in Min. | Sec. | Speed Miles per Hour | 1 Kilometer in Min. | Sec. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6 | 13 | 21 | 1 | 46 | 31 | 1 | 12 | 41 | 0 | 54 |
| 8 | 4 | 40 | 22 | 1 | 41 | 32 | 1 | 10 | 42 | 0 | 53 |
| 10 | 3 | 44 | 23 | 1 | 37 | 33 | 1 | 08 | 43 | 0 | 52 |
| 12 | 3 | 06 | 24 | 1 | 33 | 34 | 1 | 05 | 44 | 0 | 51 |
| 15 | 2 | 29 | 25 | 1 | 29 | 35 | 1 | 03 | 45 | 0 | 50 |
| 16 | 2 | 20 | 26 | 1 | 26 | 36 | 1 | 02 | 46 | 0 | 48 |
| 17 | 2 | 11 | 27 | 1 | 23 | 37 | 1 | 00 | 47 | 0 | 47 |
| 18 | 2 | 04 | 28 | 1 | 20 | 38 | 0 | 58 | 48 | 0 | 46 |
| 19 | 1 | 57 | 29 | 1 | 17 | 39 | 0 | 57 | 49 | 0 | 45 |
| 20 | 1 | 52 | 30 | 1 | 15 | 40 | 0 | 56 | 50 | 0 | 44 |

20. Rule S-72. WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION.

21. RULE 93. Yard limits are defined by yard limit signs at the following stations:

EIGHTH STREET — SAN YSIDRO
TIJUANA — EL CENTRO

MISCELLANEOUS

22. Rule 10 (H) is changed to read: "Yellow signal must be placed one-quarter mile from structure," instead of one-half mile. Green signal referred to in rule will not be used.

Rule 10 (J) is changed to read: "Slow boards will be placed one-quarter mile from structure or track," instead of one-half mile.

23. Rule 869. All brakemen, except rear brakeman, will ride on top of freight and mixed trains as follows:

EASTWARD { Hipass to Jacumba; Culvert 106-B to Coyote Wells.

WESTWARD, ON TRAINS OF 25 OR MORE CARS { Mile Post 83 to Tecate; Kilometer 54 to Redondo.

Rear brakemen on freight and mixed trains between Garcia and Matanuca and on descending grades between Redondo and Coyote Wells will observe track from rear of caboose or coach so that train may be stopped in event of derailment. Lights are provided on coaches and Dietz lanterns on cabooses to assist in observing the track.

24. Trains will display head lights and marker lights through tunnels No. 6 to No. 20, inclusive.

25. Engine flues must be sanded Eastbound approaching Hipass, Westbound when approaching Culvert 106-B.

26. Engine flues must not be sanded while passing places where damage from fire might result.

27. Cars must not be cut off train on grades depending on hand or air-brakes to hold them, but must be placed with the Engine.

28. Engine bell must be rung continuously between the following points:
Main Line: San Diego and Kilometer 7, Garcia and east end of Tunnel 2, Mile Posts 96 and 106, Dixieland and El Centro.
Lakeside Line: 8th Street and Mount Hope Cemetery.

29. When a train parts while in motion due to uncoupling by reason of knuckle slipping or opening or similar causes, Conductors will personally make inspections and ascertain, if possible, the actual cause and take necessary steps to prevent a recurrence.

30. When cars are left on grades not protected with derailers they must be chained to the rail.

31. When making up through freight trains, empty and wood frame cars must be placed behind heavy loads and in rear of trains.

32. Air must be cut in when handling cars on Commercial Street between 13th and 32nd Streets.

33. Cars must not be left standing on spur or siding at Palm City nearer than 150 ft. to Palm Avenue crossing.

34. When using "Set-out track," Kettner Blvd. and Broadway, San Diego, San Diego & Arizona Eastern Railway trains will protect against San Diego Electric Railway inbound trains and must not delay the latter trains.

35. When Signals No. 1022 and No. 1023 are in "stop" position, train shall stop in compliance with Rule No. 501 and then proceed immediately with caution to Bridge No. 102-A.

When stopped by these signals, train shall not proceed over Bridge No. 102-A until authorized by either tunnel guard, bridge foreman or track foreman.

36. When pushing trains out of yards no locomotive will be placed behind wooden underframe equipment.

TRAIN AND AIR INSPECTION

37. In addition to running tests that are made after leaving terminal, inspection points, or at any point where brake pipe has been broken, to fully comply with Rule No. 39 of Air Brake rules, running test will be made on eastward passenger trains at Culvert 106B.

38. Rules 24 and 38, rear end test between terminals per "Rules and Regulations governing Care and Operation of Air Brakes and Air Signal Apparatus," will be made on all trains at Mills Crossing or Hipass.

Rear end test and train inspection will be made on Train No. 52 and all Eastward freight trains at Culvert 106-B.

39. When helper engines are in trains, after a rear end test has been made, the leading engine must not attempt to start until the helper engine has whistled off. The helper engine must not whistle off until receiving signal from the rear, which will not be given before the air pressure on caboose gauge indicates Seventy (70) pounds.

40. Air brakes on two adjoining cars must not be cut out leaving any station where cars can be separated.

41. Following points are designated for careful inspection of freight trains: Eastward freight and mixed trains will stop not less than five minutes at Jacumba MP 114 and Coyote Wells for cooling of wheels and inspection.

Westward freight and mixed trains will stop not less than five minutes at Campo or Clover Flat and Tecate for cooling of wheels and inspection.

Eastward passenger trains will stop at Jacumba and at Coyote Wells for inspection of wheels and brakes.

42. Passenger equipment must not be switched, either in yards or on line, unless air brakes are cut in and made operative.

43. Gross tonnage of any freight train must not exceed the following number of M's per operative brake between the stations shown:

| | |
|---|---|
| Hipass and Coyote Wells | 100 M's |
| Hipass and Redondo | 125 M's |

METHOD FOR TESTING FOR TRIPLE, CAUSING UNDESIRED APPLICATION OF AIR BRAKES (DYNAMITER)

44. If test is made on a grade, a sufficient number of hand brakes must be set to secure the train.

Test must be made from rear end of train and under no circumstances by the engineman.

Engineman having first been instructed by the Conductor to set his brake valve and leave it in the running position, train crew then go to rear end of train and so locate themselves that each man can observe two cars at a time, the number of cars in each test depending on the number of trainmen available. Close the angle cock on about fourth or sixth car from the rear, but do not break the air hose. One man will then go to rear of caboose, open angle cock very slowly, allowing a small flow of air to escape, about the same amount as would be released from brake valves for a service application, then close it. If all brakes apply properly and show no bad triple valve action, then open the angle cock on rear of caboose, letting out all of the air in the block of cars being tested. Close the angle cock, thus leaving block of cars empty of air in rear of train. Then proceed to the point where the angle cock had been closed on the train, leaving it closed, and close another angle cock about four or six cars ahead of this point. Then proceed with the test in the same manner as for the first block of cars in the rear, permitting the air in this block of cars to flow back to the uncharged portion. This procedure to continue until the entire train has been tested.

Air brake of car going into emergency will be cut out and report rendered on Form 2809.

After test completed and before train proceeds, rear end air brake test as per Rules 24 and 38 must be made to insure all hose coupled and angle cocks in proper position.

USE OF RETAINERS

45. All retainers on freight and passenger trains must be used: Eastward Hipass to Jacumba, Culvert 106 B to Coyote Wells. Where retainers are used, speed of freight and mixed trains on any grade of over one per cent. must not exceed 25 miles per hour; and on grades this character for the first five miles, time consumed in traveling any one mile must be not less than three minutes. This maximum speed restriction will not affect speed on heavy grade or in other locations where maximum is now provided.

INTERNATIONAL BOUNDARY

46. Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt response is not gained after whistle blast, an employee will go at once to Government Headquarters and request service.

47. Trains will stop before crossing the International Boundary Line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. Trains in both directions will stop at Tecate. Trains must not cross International Boundary Line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.

48. Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by Officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. Mixed trains will also stop passenger equipment at depot when passengers are handled.

49. Trains carrying passengers will not stop between Lindero and Campo Stations except in cases of emergency.

STRUCTURES LESS THAN STANDARD CLEARANCE

SAN DIEGO-EL CENTRO SUBDIVISION

50. Ice dock at Boal.

Ice dock Boal is equipped with aprons which must be raised and secured before moving cars on adjoining track.

Rock bins, sand chute and braces for overhead conveyor Otay Gravel Pit spur.

Pipe and counter-weights on Malt Plant, Tecate.

# Special Instructions

SAN DIEGO-LAKESIDE SUBDIVISION

51. Overhead highway bridge main line between Grossmont and El Cajon.

SAN DIEGO YARDS

52. Trolley wires and pole on Fifth Avenue spur between J and L Streets.
Freight house tracks.
Union Oil Company spur tracks.
Trolley wires on San Diego Electric Railway Transfer, and Broadway team track.
Sperry Flour Company Spur.

53. All employees are warned it is dangerous to stand erect on cars, especially cars of extraordinary height.

54. Train and Enginemen are cautioned to watch closely for impaired clearance signs.

55. Location and Capacity of Additional Spur Tracks on San Diego-El Centro Subdivision.

| Name | Connection | Distance from San Diego in Miles | Capacity |
|---|---|---|---|
| Linen | W | 9.5 | 16 Cars |
| Standard | E | 19.2 | 4 Cars |
| Arguello | W | 20.2 | 4 Cars |
| Barrett | W. & E. | 67.1 | 16 Cars |
| Clover Flat Pit | W | 74.4 | 17 Cars |
| Sugar Loaf Pit | W | 117.1 | 5 Cars |
| Lumber | E | 135.4 | 7 Cars |
| Edgar | E | 137.1 | 11 Cars |
| Blue Goose | E | 142.6 | 5 Cars |

56. ADDITIONAL STATIONS ON SAN DIEGO-EL CENTRO SUBDIVISION

| Name. | Distance from San Diego. |
|---|---|
| West Park Ave. | 14.2 |
| Mills Crossing | 83.5 |
| Dubbers | 96.0 |

RATINGS OF LOCOMOTIVES

57. In M's of 1000 pounds.

| Eng. No. | Nominal Class | Official Class | Garcia to Redondo .9% Grade | Redondo to Hipass 1.4% Grade | Marea to Coyote Wells .9% Grade | Coyote Wells to Hipass 2.2% Grade | .4% Grade | Level Track |
|---|---|---|---|---|---|---|---|---|
| 12 | T-56 | T-57-18/24-95 | 1400 | 810 | 1400 | 490 | 2650 | 7450 |
| 20 | T-57 | T-63-21/28-135-S | 2400 | 1400 | 2400 | 900 | 4500 | 12550 |
| 24) 25) 26) 27) | T-58 | T-63-21/26-141-S | 2300 | 1350 | 2300 | 830 | 4350 | 12200 |
| 50 | C-30 | C-50-20/24-122 | 2050 | 1200 | 2050 | 760 | 3800 | 10600 |
| 101) 102) 103 104 105) 106) | C-31 C-9 C-8 C-10 | C-57-22/30-198-S) C-57-22/30-194-S) C-57-22/30-192-S) C-57-22/30-194-S) | 3250 | 1900 | 3250 | 1200 | 6050 | 16800 |
| 2353) ) 2354) | T-31 | T-63-22/28-162-S | 2900 | 1700 | 2900 | 1050 | 5450 | 15250 |
| Allowance for empty and under-loaded cars | Less than 50 Ms. | | 3 | 3 | 3 | | 3 | |
| | More than 50 Ms. | | 0 | 0 | 0 | | 0 | |

**These ratings include the total weight of train, exclusive of engine and tender which the different class of locomotives will haul in each direction between the stations shown.**

58. LIGHT WEIGHT OF PASSENGER CARS.

| | Car No. | Light Weight |
|---|---|---|
| Cafe-Lounge | | 166,000 |
| Business Cars | 050 | 146,500 |
| Comb. Coach-Baggage | 174 | 136,900 |
| " " " | 175 | 105,200 |
| " " " | 176 to 178 | 115,280 |
| Coach | 200 | 108,900 |
| " | 201 to 205 | 107,900 |
| " | 206 to 208 | 112,500 |
| Streamlined Chair Car | | 104,500 |
| Pullman | Wood | 125,000 |
| " | Steel Underframe | 145,000 |
| " | All Steel (Fort series) | 152,000 |
| " | All Steel (Lake series) | 163,500 |
| " | All Steel (Camp series) | 159,680 |
| " | All Steel (Rock series) | 167,700 |

INSTRUCTIONS IN CASE OF FIRE

1. FIRE FIGHTING EQUIPMENT:

(a) FIVE GALLON FIRE EXTINGUISHERS ARE LOCATED AT FOLLOWING POINTS:

| | |
|---|---|
| Between Tunnels 1 and 2 | West end Tunnel 14 |
| Between Tunnels 3 and 4 | West end Tunnel 15 |
| West end Tunnel 5 | West end Tunnel 16 |
| West end Bridge 97-C | East end Tunnel 17 |
| East end Tunnel 6 | West end Tunnel 18 |
| Both ends Tunnel 8 | West end Bridge 104-A |
| West end Tunnel 10 | West end Bridge 104-B |
| West end Tunnel 11 | West end Tunnel 19 |
| West end Tunnel 12 | West end Tunnel 20 |
| East end Tunnel 13 | West end Tunnel 21 |

Note:—Fire extinguishers at Tunnels are located just inside tunnel portals.

(b) CONNECTIONS FOR PORTABLE PHONES IN CARRISO GORGE ARE LOCATED AT FOLLOWING POINTS:

| | |
|---|---|
| Near West end Tunnel 5 | Near both ends Tunnel 14 |
| East end Tunnel 6 | West end Tunnel 15 |
| West end abandoned Tunnel 7 | East end Tunnel 16 |
| Both ends Tunnel 8 | West end Tunnel 17 |
| West end Tunnel 9 | West end Tunnel 18 |
| West end Tunnel 10 | West end Tunnel 19 |
| East end Tunnel 12 | West end Tunnel 20 |
| East end Tunnel 13 | West end Tunnel 21 |

There are telephones at the east end of Tunnel 11 and at the east end of Bridge 102-A.

These connections are provided for emergency service only and anyone using them in an attempt to get help must, after his call has been placed, DISCONNECT HIS PORTABLE PHONE so that Operator at San Diego can call camps. Failure to disconnect phone will interfere with calling circuit.

(c) FIRE HOSE AND CONNECTIONS ON LOCOMOTIVES:

Engines No. 101, 102, 103, 104, 105, 106, 2353, and 2354, are equipped with fire hose connections on feed water line between the injector and the check valve. On the deck of the tender of these engines there is a hose reel holding 100 feet of fire hose with nozzle attached. When using hose, be sure to close valve ahead of the check valve before opening valve on the fire hose connection. This will prevent hot water backing up into hose line in case check valve fails to seat.

Other engines not equipped with hose connections, if location of fire permits, will get Tank Car at Tunnel 15 Spur and move it to fire, using equipment mounted on tank.

(d) TANK CAR MW 1001:

Tank Car MW 1001 with 10,000 gallons of water is kept first out at Tunnel 15 Spur. On deck over top of tank is mounted a steam pump, 300 feet of fire hose on a reel, and a tool box containing fire-fighting tools and fittings. Car is equipped with headlights on each end, and extension cord to be plugged into socket in cab of engine is kept in tool box. Steam line to pump is fitted with steam hose connection at each end of car, so that pump may be operated from either end of engine or train, and by either steam or air. A length of steam hose and fittings are kept in tool box of tank car to make connections. When pump is run by air, automatic brake valve on engine should be held in Full Release position to increase volume of air.

2. INSTRUCTIONS:

(a) Rear brakeman and fireman on eastward trains will keep a sharp lookout after passing Tunnel 15 Spur and be prepared to accept stop signal from Tunnel Guard.

(b) Steam hose must be coupled and steam cut through to rear of passenger trains at all times regardless of weather conditions. This in order to handle fire-fighting car at Tunnel 15 Spur at rear of train.

(c) Trains discovering a fire should immediately call operator at San Diego so other equipment can be dispatched to the fire. Every effort should be made to extinguish the fire with the equipment on the engine and tender. If it is evident that fire cannot be put out with equipment at hand, or if engine is not equipped with fire hose, and it is possible to reach Tank Car at Tunnel 15 Spur, get that car and return it to the fire while there is sufficient water left in the tender to make the round trip. Tank Car should be picked up so that it will be headed into the fire ahead of engine or train. Stake and pinch bar are included with tools on deck of tank car.

Tunnels and bridges in some places are located so close together that a fire may spread to another structure. While it might not be possible to extinguish the fire in one structure, equipment should stand by to prevent fire from spreading.

Employes will use their best judgment in meeting an emergency and act in the safest and quickest way to meet the conditions.

(d) Tank Car MW 1001 must always be left, filled and first out at Tunnel 15 Spur.

## SURGEONS

Dr. C. A. Walker, Chief Surgeon and Manager, San Francisco.

**Dr. F. C. Russell, District Surgeon, 1109 Medico-Dental Bldg, San Diego.**
Office Phone: F. 4141; Res. Phone: J. 9491.

**Dr. H. G. Holder, District Surgeon, 1109 Medico-Dental Bldg., San Diego.**
Office Phone: F. 4141; Res. Phone: La Jolla 3862.

Dr. Thos. F. O'Connell, Asst. District Surgeon, 1109 Medico-Dental Bldg., San Diego. Office Phone: F. 4141; Res. Phone: J. 6280.

**Dr. T. M. Cunningham, District Physician, La Mesa, Calif.**
Office Phone: L. M. 963; Res. Phone: L. M. 361.

**Dr. Molina Reyes, District Surgeon, Tijuana, B. C., Mexico.**
Phone: Tijuana 205-M.

**Dr. F. W. Peterson, District Surgeon, El Centro.**
**Office Phone: E. C. 444; Res. Phone: E. C. 463.**

**Dr. W. W. Apple, District Surgeon, El Centro.**
**Office Phone: E. C. 55; Res. Phone: E. C. 351.**

**Dr. T. E. Bartholomew, District Surgeon, Calexico.**
Phone: Calexico 313.

Dr. Harold J. Gregg, Asst. District Surgeon, Calexico.
Office Phone: Calexico 361; Res. Phone: Calexico 748.

## HOSPITALS

**General Hospital, San Francisco, California.**

Division Hospital, Mercy Hospital, Hillcrest Drive, San Diego, Calif.

**S. A. Lamey, Trainmaster and Chief Dispatcher.**
Office Phone: Main 7111.

# LINES OF THE
# SAN DIEGO & ARIZONA EASTERN RY.
## IN CALIFORNIA
# TIJUANA & TECATE RY.
## IN MEXICO

SCALE OF MILES
0 5 10 15 20 25

JUNE 1930
C.M.E.